REMARKS

Claims 1-54 are pending in the application.

Claims 1-54 have been rejected.

Applicant incorporates by reference those portions of Applicant's response to the previous Office Action in this matter that are implicated by the rejections discussed in this paper.

Rejection of Claims under 35 U.S.C. § 102

Claims 1, 2, 4-7, 11, 15, 16, 18-21, 25, 29-31, 33-36, 40, 44, 45, 47-49, and 51 stand rejected under 35 U.S.C. § 102 as being unpatentable over U.S. Patent No. 6,654,802 ("Oliva"). Applicant respectfully submits the following discussion regarding the substance of the Oliva-based rejection and in the light of this discussion requests the Examiner's reconsideration and withdrawal of the final rejection.

Independent Claims 1, 15, 29, 30, and 44

Applicant respectfully submits that Oliva does not disclose each limitation of independent Claims 1, 15, 29, 30, and 40 and therefore Oliva cannot anticipate those claims or any claims that depend therefrom. In the below discussion, Applicant responds to the Examiner's position expressed in the Office Action, and clarifies positions expressed in Applicant's response to the previous Office Action.

Source Identifier and Destination Identifier

The Office Action states that Oliva discloses an apparatus that comprises "a means for transmitting data in a transport overhead field to at least one network element … the data providing a source identifier and a destination identifier," and provides

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supporting citations. *See* Office Action, p. 2 (January 12, 2005). Applicant respectfully submits that the Oliva disclosure does not present data providing a source identifier and a destination identifier as required by Claim 15.

Oliva discloses a system in which network elements gather localized information regarding the identity of neighboring network elements and connected ports. This localized information can then be transmitted to a network management node to generate a topology. The system involves a network comprising a set of network elements that each have one or more ports connected a neighboring network element via a physical link. "[E]ach port in a network element has local knowledge of the identity of the corresponding port and network element at the far end of the physical link." Oliva 3:16-18. That local knowledge (of an element/port's identity and the identity of the element/port to which it is connected) can be transmitted to a network management system that can collate all such information in the network and generate a topology of the network. Oliva:3:18-23.

Each network element (as illustrated in Oliva, Figs. 1 and 3) has a unique network element identifier stored in the network element. *See* Oliva 4:50-56. Each port in each network element has a unique port identifier that is stored in the associated network element. *See* Oliva 4:66-5:5. A first network element also has the capability of storing information as to a second network element / port that is connected to a one of the first network element's ports. *See* Oliva 5:55-56. The first network element receives the information from the second network element through the transmission of "network element and port identifiers using transport overhead bytes that are part of the overall design of the transmission system." Oliva 5:33-36. The network element and port

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identifiers that are transmitted are those of the source network element and port, not those of the destination.

- "In step 34 [sic], each source port 26 of each node transmits the network element and port identifiers...." Oliva 5:33-34. The only network element and port identifiers that are referenced to this point in the disclosure are those of the source node (*e.g.*, Oliva 4:50-51 and Oliva 4:66-67).

- "For each connection between network elements 42 and 44, the source network node ... provides identification of the source network element as well as identification of the source port ... using byte(s) in the frame overhead to the destination node, such as network element 44. Each destination node continuously receives the identification of the source port and source node at the far end of each link 28." Oliva 7:15-22 (emphasis added).

- Claim 1: "(c) in the overhead data of each transmission of data, providing a network element identification that identifies one of the network elements that the data was immediately transmitted from [i.e., the source network element of that data]; (d) in the overhead data of each transmission of data, providing a port identification that identifies a source port of the plurality of ports that the data was immediately transmitted from". Oliva 10:58-65.

Oliva provides no disclosure of destination information (*e.g.*, network element or port) being included in frame overhead by a source node.

The Office Action cites to Oliva 10:18-27 as support for the proposition that the transmitted data in the overhead field includes both a source identifier and a destination identifier. Office Action, p.2. The cited text reads as follows:

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> The information [obtained by a management system via an undisclosed packet format] is used to determine associations between network elements 42 and 44 [*see* Oliva, Fig. 11]. These associations define network topology 74. In the example of Fig. 11, link 100 comprises a two-way communications link between network elements 42 and 44. Registers 72 associated with connected ports 52 and 58 include source identifiers 64, 66, and 68, 70, respectively and destination identifiers 68, 70 and 64, 66, respectively. Management system 46 determines topology 74 from the identifiers.

Oliva 10:18-27 (emphasis added). The cited section does not discuss the transmission of data in an overhead field. Rather the section reiterates disclosure in Oliva that registers associated with a port in a network element contain both the identity of that port and the network element on which that port resides, and the identity of a second port to which the first port is connected and the identity of the network element on which the second port resides.

The Office Action further cites to the transport overhead field illustrated in Figures 4, 7, 8, and 10 as support for the proposition that the transmitted data in the overhead field includes a source identifier and a destination identifier. Office Action, p.11. None of the cited figures discloses both a source and destination identifier being part of data transported in the illustrated overhead fields.

The Office Action also states that Applicant's "argument is unreasonable because an overhead field of a data packet is usually used to store overhead data such as source and destination identifiers. Therefore, the destination identifiers should be placed in the transport overhead field as usual." In order for a reference to be anticipatory prior art to an application under 35 U.S.C. § 102, the reference must disclose each and every limitation of the application. As established above, Oliva does not disclose a destination identifier as part of the data in a transport overhead field as claimed in the present Application.

Applicant's position is reasonable because destination identifiers are not necessary in light of the structure of the system disclosed in Oliva. A source port is disclosed to be connected to a single destination port, therefore a destination identifier need not be included in the transmission. However, a destination port needs to know the source of a packet because there is a possibility that a network element could be removed from the network and replaced by another, or a different port on the same network element could be connected.

End-to-End Services

The Office Action states that "Oliva also provides end-to-end services for transmitting overhead data from a source node to a destination node in network elements 22 and 24." Office Action, p.12. The Office Action then cites to disclosure related to the formatting of frame overhead and payload data (Oliva 5:17-32) and the use of a SONET J0 byte to carry user programmable data (Oliva 8:66-9:2).

Such disclosure does not relate to the limitation as claimed: "using the data in the transport overhead field to provide end-to-end services." *See, e.g.*, Claim 1. The disclosure merely suggests a mechanism for transporting data in an overhead field, not to actually using the data. Further, no mention is made to end-to-end services in Oliva as that term is defined in the Application. *See, e.g.*, Application, p.14 ("[O]perators using a system in accordance with an embodiment of the invention use the J1 field to create new paths for services and provide end-to-end path routing and provisioning.").

For the reasons set forth above, Applicant respectfully submits that Oliva does not disclose each limitation of the independent claims in the present application and therefore those claims are not anticipated. Further, the listed claims that are dependent on the independent claims are likewise not anticipated for at least the above reasons. Therefore,

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Applicant respectfully submits that Claims 1, 2, 4-7, 11-15, 16, 18-21, 25, 29-31, 33-36, 40, 44, 45, 47-49, and 51 are in condition for allowance and Applicant requests that the Examiner reconsider the rejections to those claims.

Rejection of Claims under 35 U.S.C. §103

Claims 3, 10, 17, 24, 32, 39, 46, and 50 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Oliva in view of U.S. Patent Application Publication 2002/0009048 of Hosler et al. ("Hosler"). Claims 8, 9, 12-14, 22, 23, 26-28, 37, 38, 41-43, and 52-54 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Oliva in view of U.S. Patent 5,841,760 issued to Martin et al. ("Martin").

All of the claims rejected under 35 U.S.C. §103(a) depend on claims discussed above with regard to the Oliva-based rejection under 35 U.S.C. §102. As such, these dependent claims contain limitations not disclosed in Oliva (as discussed above). The Office Action makes no suggestion that the references combined with Oliva to reject the various claims under 35 U.S.C. §103(a) provide those missing limitations. Applicant respectfully submits that neither Oliva combined with Hosler nor Oliva combined with Martin, taken alone or in combination, discloses or suggests the limitations discussed above. Without disclosure of each claimed limitation, the suggested combinations cannot render obvious the dependent claims.
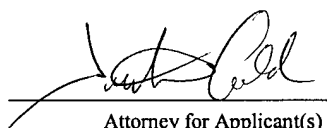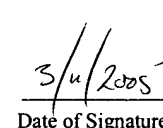
Hosler does not provide a source and destination identifier being contained within an overhead field. The Office Action states that "Hosler disclosed such a J1 includes the source identifier and the destination identifier." Office Action, p.5 ("Using the J1 bytes, a local path terminating equipment 'PTE' injects identifying signature data...."). But according to the disclosure in Hosler, the signature data in a frame's path overhead is the

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"identifying signature data of the interface that transmitted the frame," not that of the receiving interface. *See* Hosler, p.4, sect. [0042] (emphasis added). Such information included in the signature includes "identifying a source interface as a working interface, a protect interface, or a non-APS interface." *Id.* There is no mention in the disclosure of destination information being included because Hosler is concerned with a source node informing a receiving node which interface, working or protect, is being used as the active circuit to transmit data. The destination node uses this information to set the correct active circuit at the receiving end. No destination information is needed or desirable for such a determination. Nor does the signature information include information regarding internet protocol, as suggested by the Office Action, but instead is limited to the above in the Hosler disclosure.
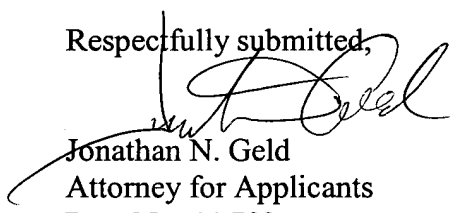
For at least these reasons, Applicant respectfully submits that the Office Action fails to present a *prima facia* case of obviousness of Claims 3, 8-10, 12-14, 17, 22-24, 26-28, 32, 37-39, 41-43, 46, 50, and 52-54, and that they are in condition for allowance. Applicant therefore respectfully requests the Examiner's reconsideration of the rejections to these claims.

CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5090.

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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop AF, COMMISSIONER FOR PATENTS, P. O. Box 1450, Alexandria, VA 22313-1450, on March 11, 2005.

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Attorney for Applicant(s)   Date of Signature
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